# CAC Payback Period

## Metric Standards Document

***(Version 1.0 - June 5, 2023)***

**Metric Name: Customer Acquisition Cost Payback Period**

**Alternative Metric Name(s): CAC Payback Period**

## CAC Payback Period Overview

**Definition:** CAC Payback Period

The CAC Payback period is the number of months it takes for the gross profits from new customer ARR to pay back the sales and marketing expenses it took to acquire those new customers and the associated Gross Profit. Gross Profit equals New ARR x Suscription Gross Margin.

One main differences between the CAC Payback Period and the CAC Ratio is that the CAC Payback Period takes into consideration gross margin and it is expressed in terms of months instead of as a ratio.

**Business Value and Insights:** CAC Payback Period

The CAC Payback Period is effectively a working capital metric and helps a company determine how many months will be required to return the investment made, after factoring in the Cost of Goods Sold (Gross Margin adjusted) to execute a specific growth plan in terms of new CARR acquired.

CAC Payback Periods are correlated to the average value of a new customer as measured by CARR per new customer. An alternative term used for this is the “average annual contract value” per new customer, though this introduces some nuances including only recurring revenue in ACV which is why we recommend using CARR for this standard definition.

**CAC Payback Period Formula**

$$\frac{\text{Fully Loaded Sales and Marketing Expenses to Acquire New Customers}}{(\text{CARR}^1 \text{ from New Customers} * \text{Subscription Gross Margin Percentage})} \times 12$$

[1]CARR is Contracted Annual Recurring Revenue and is defined here.

***Expense Timing Guidance Points[1]:***

*Marketing and Sales Expenses should be measured for the time period preceding the new ARR by the length of the sales cycle.*

*Example #1: If the sales cycle is ~90 days, then the New CAC Ratio for Q2 should be calculated based on Q1 Sales & Marketing expense divided by Q2 New ARR.*

*Example #2: For a company with a sales cycle of ~30 days, then New CAC Ratio would be calculated using Sales & Marketing for the previous month divided by New ARR for the current month.*

**Data Inputs Required:** CAC Payback Period

Data Input #1: Fully Loaded Sales and Marketing Expenses

This data is typically available from the Income Statement.

Data Input #2: CARR from New Customers

This information is typically available in the Customer Relationship Management Software or billing system.

Data Input #3: Gross Margin Percentage

This information is available from the Income Statement or Accounting System

**Recommended Calculation Timing:** CAC Payback Period

The CAC Payback Period can be calculated based upon data from the trailing 1, 3, 6 or 12 month period.

## CAC Payback Period Considerations and Nuances

***#1: Fully loaded Sales and Marketing Expenses***

Sales and Marketing expenses should be fully loaded including variable compensation, bonuses, benefits and any other shared expenses that are allocated to the departments. Sales commissions should be fully burdened up-front.

**#2: Timing of Sales Commissions**

If sales commissions represent a meaningful percentage of CAC, a more accurate calculation can be achieved by NOT lagging commission expenses and including them in the same period the new CARR is booked. This is different from current ASC 606 guidance for how Sales Commissions are represented on the Income Statement.

***#3: Customer Success Expense***

Customer Success expenses should be factored into the CAC Payback Period if Customer Success time is allocated to supporting new customer acquisition. The amount factored into CAC Payback Period should be based on an allocation basis equal to the time spent on acquiring new customers.

If questions arise, refer to how Customer Success is allocated to Operating Expenses versus Cost of Goods Sold in your company.

***#4: Time period of Expenses versus CARR***

*The Marketing and Sales Expenses should be measured for the time period preceding the new CARR by the length of the sales cycle.*

*Example #1: If the sales cycle is ~90 days, the CAC Payback Period for Q2 should be calculated based on Q1 Sales & Marketing expense divided by Q2 New CARR.*

*Example #2: For a company with a sales cycle of ~30 days, then CAC Payback Period should be calculated using Sales & Marketing for the previous month divided by New CARR for the current month.*

**#5**: **PLG Business**

Freemium or Free Trial expenses, including delivery costs such as hosting, product costs, etc. may be considered part of Customer Acquisition Cost.

**#6: Paid Pilots or Trial**

To the extent you use paid pilots or trials it is recommended to consider whether to include or exclude the expense and associated revenue in the CAC calculation

**#7: Usage-Based Pricing**

For usage-based pricing models that are generating predictable, “variable annual recurring revenue” that is relatively consistent throughout the year, an estimated amount of variable ARR per customer could be added to Contracted ARR (CARR) for use in the CAC Payback Period calculation.

If the “variable annual recurring revenue” tends to ramp over time, a standard ”variable” revenue model should be built based on historical monthly trends of new customers. This “estimated variable recurring revenue” would be added to the Contracted ARR of new customers closed in the period. It is important to factor in the “Gross Margin” of the estimated variable ARR into the calculation of the CAC Payback period.

## Sample Calculations: CAC Payback Period

### Sample #1: 90 Day Sales Cycle

Sales and Marketing Expenses (Previous Quarter) = $1,000,0000
New CARR (Current Quarter) = $600,000
Gross Margin = 80%

**Calculation Formula:**

$$\frac{\$1,000,000}{\$600,000 * .80} \text{ X } 12 = 25 \text{ Month CAC Payback Period}$$

### Sample #2: 30 Day Sales Cycle

Sales and Marketing Expenses (Previous Month) = $500,000
New CARR (Current Month) = 750,000
Gross Margin = 86%

**Calculation Formula:**

$$\frac{\$500,000}{\$750,000 * .86} \text{ X } 12 = 9.3 \text{ Month CAC Payback Period}$$

* (Current Month - 1) = Previous Month

### Sample #3: Usage-Based Pricing

Sales and Marketing Expenses (Previous Quarter) = $600,0000
New CARR (Current Quarter) = $300,000
Variable ARR (Current Quarter) = $200,000
Subscription Gross Margin = 80%
Variable ARR Gross Margin = 75%

**Calculation Formula:**

$$\frac{\$600,000}{(\$300,000 * .80) + (\$200,000 * .75)} \text{ X } 12 = 18 \text{ Month CAC Payback Period}$$

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**Rule of - Links to related Standards**

**Customer Acquisition Cost (CAC):** Standards Document

**Contracted Annual Recurring Revenue (CARR):** Standards Document